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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,392	11/26/2001	Paul Gothard Knutson	PU010271	7854

7590 06/28/2004

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EXAMINER

LIU, SHUWANG

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,392

Applicant(s)

KNUTSON, PAUL GOTHARD

Examiner

Shuwang Liu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 11/26/01 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 2, 6 and 7 rejected under 35 U.S.C. 102(a) as being anticipated by Hauge et al. (WO 01/50757A1).

As shown in figures 2, 3 and 6, Hauge et al. discloses:

(1) regarding claim 1:

a remodulator clock signal source, comprising:

a vestigial sideband demodulator (66 in figure 6), the demodulator being responsive to vestigial sideband transmissions containing timing information, the demodulator recovering the timing information (fs); and

a signal path coupling the recovered timing information produced by the demodulator to a remodulator (32) clock input (30) so as to regulate the remodulator

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timing sequence.

(2) regarding claim 2:

a system comprising:

an input (output from 64) for receiving a modulated signal comprising timing information;

a demodulator (66) coupled to the input for extracting the timing information (fs);

a phase locked loop (72) coupled to the demodulator for generating clock pulses in response to the timing information; and

a remodulator (32) coupled to the phase locked loop for receiving the generated clock pulses.

(3) regarding claim 6:

wherein the modulated signal is a VSB modulated signal (see abstract) containing high definition television information.

(4) regarding claim 7:

wherein the VSB modulated signal is in accordance with the ATSC standard (inherently).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hauge in view of Fang (US 3,701,023).

Hauge discloses all of the subject matter except comprising a variable frequency oscillator, coupled to the phase locked loop, the variable frequency oscillator receiving a correction signal from the phase locked loop based upon the source of timing information, the variable frequency oscillator thereby having an accuracy substantially equal to the source of timing information.

Fang teaches a variable frequency oscillator (115 in figure 1), coupled to the phase locked loop, the variable frequency oscillator receiving a correction signal from the phase locked loop based upon the source of timing information, the variable frequency oscillator thereby having an accuracy substantially equal to the source of timing information (column 6, lines 44-66).

It is desirable to generate an improved demodulation carrier having the proper frequency and phase to accurately demodulate a modulated signal having frequency offset and phase jitter by using the variable frequency oscillator. Therefore, it would have been obvious to one skill in the art at the time the invention was made to include the variable frequency oscillator as taught by Fang in the PLL of Hauge so as to provide the proper frequency and phase to accurately demodulate a modulated signal having frequency offset and phase jitter.

Allowable Subject Matter

6. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or fairly suggest the PLL comprising a first closed loop operating condition characterized by the generation of the correction signal to the variable frequency oscillator based upon data from the timing information and a second open loop operating condition characterized by an absence of data from the timing information, thereby causing the variable frequency oscillator to operate without a correction signal.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is (703) 308-9556.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached at (703) 305-4714.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Shuwang Liu
Primary Examiner
Art Unit 2634

June 23, 2004